DOINGWHATWORKS

Audio

FULL DETAILS AND TRANSCRIPT

Bridging the Gap with a Range of Student Skills

Longfellow Middle School, Virginia • June 2008

Topic: National Math Panel: Critical Foundations for Algebra

Practice: Mastery Framework

Highlights

- Math for Success after-school program for all students
- Activities to meet the needs of a wide range of students
- Power Math semester course supports a small number of struggling students in their current mathematics classes for the full year
- Use of Larson Learning computerized pre-algebra individualized modules
- Expectation that students will explain concepts to other students, as a way to demonstrate mastery

About the Site

Longfellow Middle School

Falls Church, VA

Demographics

66% White

19% Asian

7% Hispanic

5% Other

3% Black
7% Free or Reduced-Price Lunch
6% English Language Learners
11% Special Education

Longfellow Middle School has a reputation of academic excellence, recognized nationally in the fields of mathematics and instrumental music, and named by Virginia's Governor as in the top 5% of the state's schools. Features of how mathematics is taught at Longfellow:

- Rigorous requirements in all mathematics courses,
- Leveled courses include at grade 7: Math, Honors and Algebra I; at grade 8: Algebra Readiness, Algebra I Honors, Geometry Honors,
- Math for Success after-school program for extra support for all students and Power Math semester-long course for small group of students to support them in regular math courses,
- Computerized pre-algebra modules used to help individual skill practice based on student needs,
- Routine use of peer explanation of approaches to problems, and
- Courses for acceleration of gifted students in mathematics.

Full Transcript

Hi, I am Marie Pelosi, 8th grade General Ed math teacher and Department Chair at Longfellow Middle School, in Falls Church, Virginia.

Hi, this is Heather Postlethwait from Longfellow Middle School. I am a Math 7 teacher in Falls Church, Virginia.

Pelosi: There is a wide range of skill level and math experiences among our rising 7th graders. Some of the challenges we face in getting all of our students for the full middle school program, is making sure that we, as teachers, provide as much support as possible to struggling students, who have never achieved success in math. Students in Math for Success, is a program—actually an after-school program—that is open to all students. Students, not necessarily who are failing—it's mandatory for those, if they are failing their math class, and they are not allowed to exit until their grade improves. But students, who are doing well and enjoy math, may need help from time to time, or like to stay and do their homework so that if they do have any question, the teacher is right there and available. Some students like to tutor other students in class, so these are basically the types of things that go on in Math for Success.

Postlethwait: The specific instructional approaches that we use with our students in the Math for Success program, there is a wide variety. We try to meet the needs of all those students who are in there, since they have some difficulties with math. So we try to meet the needs of those students. Sometimes, we may do a

cooperative learning activity; we may do a flash card activity where they have to match up card-sort type activity. Sometimes it's just a practice worksheet based on whatever it is that they may need. So it really depends on the needs of the students in the classroom or in the program after school that we then set the instruction for.

We do some re-teaching through packets, where it will have explanation of how to do a few problems and then 10 to 15 problems where they kind of basically practice the skill, and see how they do and they get to check it; and then if they still have some difficulties, we go back to see where the original initial problem started. So it becomes kind of a "Where did they get it wrong?" kind of thing. Did they get it wrong right at the end; or, did they miss it at the beginning? We try to figure out where their lack of knowledge is. Math for Success is not a class, it is an after-school program that we assist them with. There is no grade assigned to it, so it's basically, "Do they know it or do they not know it?" "How well do they know it?"

Pelosi: Students selected for this semester elective, Power Math, are 7th and 8th graders who have been unsuccessful in previous intervention or remediation programs where they have shown below average performance in previous years' math program. They also may not have passed the Standards of Learning Math 6 or Math 7 assessment. These are the students that are selected for the semester course, Power Math. It basically is a course—to make the long and short of it—that we as Power Math teachers support the child in his regular or her regular math class, throughout the year.

Another component of the Power Math course is the computer software, Larson Learning Pre-Algebra, which is a delivery system for interactive, customized mathematics instruction. Students individually work through modules, receive ongoing feedback to demonstrate mastery of pre-algebra skills and problem-solving strategies. Each Power Math teacher utilizes the system to determine students' curriculum, their level of mastery, and we monitor student achievement. We also keep very close communication with the child's math class, the current math that the child is in, to ensure that the student is successful and achieves.

Postlethwait: The instruction is differentiated for the students in Power Math; they are identified to be in Power Math because they do have a definitive weakness. They either have failed the Standards of Learning test, they didn't do well in 6th grade math or 7th grade math, and the teachers have recommended that they are put in there. We use a Larson Learning computer program, which the students take a pre-test before every module, it identifies their strengths and weaknesses, they go through the modules for weakness areas, and then they are post-tested at the end of each module. Power Math is a small class; it has, at most, 12 kids in it and you can do one-on-one—when the other students are on the computers, you can pull a student aside and start talking to him and do one-on-one assistance with them, or kind of evaluate them on a one-to-one basis.

They can explain it to other students. We have identified them as having mastered that concept. So, it's really nice when they are able to not only just be able to give you an answer, but to explain it to someone else; and we feel that if a student is able to do that and to do it accurately, then they pretty much know the concept.